

REMARKS:In the Title

The title has been objected to. The title has been replaced with the title suggested by the Examiner.

Claim Objections

Claims 1-8 have been objected to due to informalities. The claims have been amended as suggested by the Examiner. Withdrawal of the objection is respectfully requested.

Claims 1, 2, 7, 8

Claims 1, 2, 7, and 8 have been rejected under 35 USC 102(e) as being unpatentable over Lin et al. (US6175475).

Claim 1 has been amended in a manner believed to overcome Lin. Particularly, claim 1 now recites the limitation that the external magnetic field is adjusted to cause the magnetization of the ferromagnetic layer to be perpendicular to the external magnetic field. In contrast, the magnetic field (412, FIG. 4) referred to in the rejection is in reality the orientation of the magnetization of the free layer. This magnetization (412) would generate an internal magnetic field.

Claim 1 is believed to be allowable over Lin.

Claims 2, 7 and 8 depend from claim 1, and therefore incorporate the limitations of claim 1. By virtue of their dependence, claims 2, 7 and 8 are also believed to be allowable. Reconsideration and allowance of claims 1, 2, 7 and 8 is respectfully requested.

Claims 1, 7, 8

Claims 1, 7, and 8 have been rejected under 35 USC 102(e) as being unpatentable over Huai et al. (US6381105).

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Applicants respectfully disagree that claim 1 is anticipated by Huai. Particularly, claim 1 requires that the magnetization of the ferromagnetic layer in the bias tabs be substantially perpendicular to the direction of the external magnetic field. In contrast, the sections of Huai referred to in the rejection discuss orienting the magnetization of the antiferromagnetic layers, but not the ferromagnetic layers. Applicants also note that the magnetic field ( $I_s$ ) referred to in the rejection is in reality a representation of the flow of the sense current.


Accordingly, claim 1 is believed to be allowable over Huai.

Claims 7 and 8 depend from claim 1, and therefore incorporate the limitations of claim 1. By virtue of their dependence, claims 7 and 8 are also believed to be allowable. Reconsideration and allowance of claims 1, 7 and 8 is respectfully requested.

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 971-2573. For payment of any additional fees due in connection with the filing of this paper, the Commissioner is authorized to charge such fees to Deposit Account No. 09-0466 (Order No. SJO9-2000-0124US2).

Respectfully submitted,

Zilka-Kotab, PC

By:   
Dominic M. Kotab  
Reg. No. 42,762

Date: 4/11/05

Zilka-Kotab, PC  
P.O. Box 721120  
San Jose, California 95172-1120  
Telephone: (408) 971-2573  
Facsimile: (408) 971-4660

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